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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,093	12/23/2003	Hyung Ki Hong	041501-5594	7999

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EXAMINER	
DUONG, TAI V	
ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/743,093	HONG, HYUNG KI	
	Examiner	Art Unit	
	Tai Duong	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Upon reconsideration, the restriction requirement is withdrawn. However, examiner does not agree with Applicant's remarks that the election of species requirement is improper based on that claims are never species. It is noted that claims are *definitions* of the inventions (MPEP 806.04(e)). According to MPEP 809.02(a), action required for election of species should be taken: [C]learly identify each of the disclosed species, to which claims are to be restricted. The species are preferably identified as the species of figures 1, 2, and 3 or the species of examples I,II, and III, respectively. *In the absence of distinct figures or examples to identify the several species, the mechanical means, the particular material, or other distinguishing characteristic of the species should be stated for each species identified.* Also, in MPEP 814, for election of species requirement, the *particular limitations in the claims* and the reasons why such limitations are considered to support restriction of the claims to a particular disclosed species should be mentioned to make the requirement clear. Upon reconsideration, election of species between cholesteric liquid crystal and ferroelectric liquid crystal is not required because they are considered clearly unpatentable (obvious) over each other (MPEP 808.01(a)).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 and 21-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 21 are not consistent with the specification and the drawings. Claims 1 and 21 recite a common electrode 34 and a plurality of data electrodes 33. However, the specification and Figs. 3-4 disclose a plurality of common electrodes 34 and a data electrode 33. The remaining claims are also rejected since they depend on the indefinite claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4- 6, 21, 22 and 24-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Izumi et al (Pub. No. US 2003/0112400).

Note Figs. 1 and 4 which identically disclose the claimed LCD device comprising a common electrode 12a and a plurality of data electrodes 12b on the lower substrate to generate an In-Plane switching mode electric field parallel to the lower and upper substrates; a liquid crystal layer having a helical alignment between the lower and upper substrates wherein the upper substrate is formed of a transparent material, and the lower substrate is formed of an opaque material(paragraphs 0034, 0037, and 0039-0049).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi et al in view of Harada et al (US 6,392,725).

The only difference between the LCD device of Izumi et al and that of the instant claims is the liquid crystal layer including a ferroelectric liquid crystal layer. Harada et al disclose that it was known to employ a ferroelectric (chiral smectic) liquid crystal layer for selective reflection phenomenon (Col. 5, lines 59-67). Thus, it would have been obvious to a person of ordinary skill in the art to a ferroelectric liquid crystal layer in the LCD device of Izumi et al for selective reflection phenomenon with fast response, as compared with chiral nematic (cholesteric) liquid crystal.

Claims 7-12 and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi et al in view of Ohta et al (US 6,111,625).

Izumi et al disclose that their invention can be applied to an active matrix type LCD (paragraph 0080). Ohta et al disclose in Fig. 31 an IPS active matrix type LCD having structure similar to that of the instant claims (col. 5, line 37 – col. 13, line 60; lines 24, lines 11-25). Thus, it would have been obvious to a person of ordinary skill in the art in view of Ohta et al to apply the cholesteric selective reflection type in an IPS – TFT active matrix display device for obtaining a cholesteric selective reflection type display device with wide viewing angle.

Claims 13-20 and 33-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi et al and Harada et al.

The only difference between the LCD cited in the above rejection of claims 3 and 23 is the stacking of two liquid crystal layers with three substrates. Izumi et al disclose for full color display it was known to stack two or three layered display elements (paragraph 0079). Thus, it would have been obvious to a person of ordinary skill in the art to stack two layered display elements with three substrates for obtaining a multicolor display with reduced thickness and reduced weight, as compared with two layered display elements with four substrates.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to Tai Duong at telephone number (571) 272-2291.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

DUNG T. NGUYEN
PRIMARY EXAMINER

TVD

12/05